

wherein said modification means includes a series of processing elements arranged around a central crossbar switch.

2. (Amended) A hand held digital camera as claimed in claim 1 wherein said processing elements include an Arithmetic Logic Unit (ALU) acting under the control of a microcode store wherein said microcode store comprises a writeable control store.

3. (Amended) A hand held digital camera as claimed in claim 1 wherein said processing elements include an internal input and output FIFO for storing pixel data utilized by said processing elements.

4. (Amended) A hand held digital camera as claimed in claim 1 wherein said modification means is interconnected to a read and write FIFO for reading and writing pixel data of images to said modification means.

5. (Amended) A hand held digital camera as claimed in claim 1 wherein said processing elements are arranged in a ring and each element is also separately connected to its nearest neighbours.

6. (Amended) A hand held digital camera as claimed in claim 2 wherein said ALU includes a series of inputs interconnected via an internal crossbar switch to a series of core processing units within said ALU.

7. (Amended) A hand held digital camera as claimed in claim 6 wherein said core processing units include at least one of a multiplier, an adder and a barrel shifter.

8. (Amended) A hand held digital camera as claimed in claim 6 wherein said ALU includes a number of internal registers for the storage of temporary data.

9. (Amended) A hand held digital camera as claimed in claim 1 wherein said processing elements are further connected to a common data bus for the transfer of pixel data to said processing elements.

10. (Amended) A hand held digital camera as claimed in claim 9 where said data bus is interconnected to a data cache which acts as an intermediate cache between said processing elements and a memory store for storing said images.

In the Abstract

Please amend the Abstract as follows:

A digital camera has a sensor for sensing an image, a processor for modifying the sensed image in accordance with instructions input into the camera and an output for outputting the modified image where the processor includes a series of processing elements arranged around a central crossbar switch. The processing elements include an Arithmetic Logic Unit (ALU) acting under the control of a writeable microcode store, an internal input and output FIFO for storing pixel data to be processed by the processing elements and the processor is interconnected to a read and write FIFO for reading and writing pixel data of images to the processor. Each of the processing elements can be arranged in a ring and each element is also separately connected to its nearest neighbours. The ALU receives a series of inputs interconnected via an internal crossbar switch to a series of core processing units within the ALU and includes a number of internal registers for the storage of temporary data. The core processing units can include at least one of a multiplier, an adder and a barrel shifter. The processing elements are further connected to a common data bus for the transfer of a pixel data to the processing elements and the data bus is interconnected to a data cache which acts as an intermediate cache between the processing elements and a memory store for storing the images.

In the Drawings

Formal drawings 1 to 231 are enclosed to replace informal drawings currently on file. Fig. 2 has been amended and a marked-up copy is attached for approval.

N.E.
Ex. note